

REMARKS

In the present Amendment, claims 3-6 have been added. Claims 3 and 5 are supported by the specification, for example, original claim 1 and the paragraph bridging pages 5 and 6.

Claims 4 and 6 mirror claim 2 and depend from claims 3 and 5, respectively.

In addition, as discussed below, Applicants respectfully submit that the Board may have misunderstood the rebuttal evidence of record. That is, this issue has not been adequately adjudicated. For this reason and in view of the newly added claims, sufficient cause is present for continuing prosecution.

No new matter has been added and entry of the Amendment is respectfully requested. Upon entry of the Amendment, claims 1-4 will be all the claims pending in the application.

I. Response to Rejection Under 35 U.S.C. § 103(a)

Claims 1-2 remain rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dobashi et al (U.S. Pat. No. 5,643,676) in view of EP 0273585 (“EP ‘585”).

Applicants respectfully submit that the present claims are patentable over the cited references for at least the following reasons.

a. The present claims are not *prima facie* obvious over the cited references

Dobashi et al discloses a film for protecting automobiles during transfer and storage thereof, comprising a substrate made of a colored polyolefin film and a pressure sensitive adhesive layer made of a pressure sensitive adhesive containing as the main component at least one of polyisobutylene, butyl rubber and polybutene (Abstract). Dobashi et al does not disclose

the styrene/hydrogenated terpene copolymer resins or hydrogenated aliphatic/aromatic copolymer petroleum resins as presently claimed, as the Examiner has conceded.

EP '585 discloses a coated substrate such as an adhesive tape obtained by coating with a solution of a mixture of a rubber and a tackifier dissolved in a solvent (Abstract). EP '585 describes that the rubber is tackified with a resin to achieve the desired adhesive properties of an adhesive tape.

EP '585 describes at page 2, lines 15 - 18, that "[w]ith a higher solids content, it would be possible to increase the speed of coating the substrate because there will be less evaporation of solvent to contend with thus increasing the capability of the coating line. The reduction in the amount of solvent to be evaporated from the coated [sic] also has economic and environmental benefits."

This passage clearly indicates that the advantages are achieved by using a higher solids content, i.e., a less amount of solvent, in a rubber based pressure sensitive adhesive solution to be coated onto a substrate. However, EP '585 does not disclose or suggest that the same and/or other advantages are the direct results of incorporation of a particular *tackifier*.

Accordingly, Applicants respectfully submit that one of ordinary skill in the art would not have been motivated to substitute the tackifier of Dobashi et al with the tackifier disclosed in EP '585. Alternatively, even assuming that there might have been motivation to use the tackifier of EP '585 in the coating film of Dobashi et al, one of ordinary skill in the art would not have reasonably expected attaining improved processability as well as economic and environmental benefits at least in view of the disclosure of EP '585 described above.

Moreover, the ratio of rubber polymer to tackifier resin of EP '585 lies between 1:2 and 2:1, preferably 40:60 to 60:40, and more preferably in a 1:1 ratio (page 4, lines 15-16). The only example present employs a 1:1 ratio (page 5, lines 15-36). In contrast, the tackifier content of the Dobashi et al reference is 1-30 parts by weight, preferably 1-10 parts by weight, more preferably 3-8 parts by weight, per 100 parts by weight of the polymer that is the main component of the pressure sensitive adhesive (col. 5, lines 8-12). Thus, even when employed in the lowest amounts disclosed, the tackifiers of EP '585 are present in a substantially higher content relative to polymer than the tackifiers of the Dobashi et al reference.

Importantly, Dobashi et al specifically state that a tackifier content as high as that disclosed in EP '585 (and in contravention of the suggestion by the Examiner) would not work in Dobashi et al, by teaching "[i]f the tackifier is added in an amount of less than 1 parts by weight, it cannot have substantial effects, and *if more than 30 parts by weight, it will undesirably cause blooming of adherends, adhesive transfer on adherends and a decrease in weatherability*" (col. 5, lines 12-16) (emphasis added). By distinguishing tackifier contents greater than 30 parts by weight, Dobashi et al teach away from the use of the EP '585 resins because their content relative to that of the rubber polymer is too high. Incorporation of the EP '585 reference's tackifier in an amount greater than 30 parts by weight would render Dobashi et al unsatisfactory for its intended purpose. For this reason, a person of ordinary skill would neither have been motivated to combine, nor have a reasonable expectation of success if combining, the tackifiers disclosed in EP '585 with the coating formulas of Dobashi et al.

b. The present claims are patentable over the cited references because they provide unexpected superior results

The original specification discloses in Examples 1-4 coating formulations having, e.g., a styrene/hydrogenated terpene copolymer resin and a polyisobutylene rubber in a 1:25 ratio (Ex. 1), a 0.5:25 ratio (Ex. 2), a 3:25 ratio (Ex. 3), and a 0.2:25 ratio (Ex. 4) on a wt. basis. The coatings were applied to substrates and the resulting films were subjected to fouling evaluation test. As shown in the Table (page 19), the coating formulations of the invention contained no fouling when removed, as compared with Comparative Examples 1-2 (lacking the claimed copolymer resins), which showed fouling when removed. Similarly, Example 5 describes a coating formulation having, e.g., a hydrogenated aliphatic/aromatic copolymer petroleum resin and a polyisobutylene rubber in a 1:25 ratio on a wt. basis as in Example 1. As with Examples 1-4, the coating formulation of Example 5 showed no fouling relative to the Comparative compositions which lacked any of the claimed copolymer resins. These data demonstrate the superiority of the claimed coatings over compositions lacking the copolymer tackifiers of the invention.

Further, as shown in the Rule 132 Declaration under 37 C.F.R. § 1.132 submitted on January 30, 2004, when the sheets prepared according to the present invention, i.e., Examples 1 and 5, were applied to a paint film, no fouling occurred. In contrast, when the sheet prepared using the resin of Dobashi et al was applied to a paint film, fouling occurred. That is, the film prepared using the resin of Dobashi et al did not prevent fouling. As is apparent from the comparative data, the present invention provides unexpectedly superior results relative to

Dobashi et al in terms of the fouling property, and thus would not have been obvious in view of Dobashi et al.

In the Decision on Appeal, the Board considers that one of ordinary skill in the art would have been well aware of appropriate tackifiers for use with rubber-based pressure sensitive adhesives, referring to page 10, last paragraph of the present specification. Page 4 of the Decision.

The passage referred to by the Board describes that “the incorporation of a tackifier also is usually effective in improving adhesive strength. One or more appropriate tackifiers known for use in pressure-sensitive adhesives may be used.” In other words, it is known to add a tackifier (resin) to a pressure-sensitive adhesive composition in order to improve pressure-sensitive adhesive properties.

It should be noted that in the presently claimed invention, the tackifier added for preventing a paint film surface from fouling is a specific two component-copolymer based tackifier, which provides unexpected superior results in terms of preventing fouling as discussed above. Specifically, the tackifier used in the present invention is at least one selected from the group consisting of styrene/hydrogenated terpene copolymer resins and hydrogenated aliphatic/aromatic copolymer petroleum resins.

The mechanism is not yet clarified as to why those resins are effective for fouling prevention. As described in the paragraph bridging pages 3 and 4, specifically page 4, lines 4 to 6 of the present specification, it is thought that fouling substances on the paint film surface remain (absorb) in the pressure-sensitive adhesive layer. Regardless, Applicants are not required

to understand the principle upon which his invention works. See, e.g., *In re Parlanti et al.*, 158 F.2d 1018, 72 USPQ 275 (CCPA 1947); *In re Bowden and Iddings*, 86 USPQ 419 (CCPA 1950); *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 219 USPQ 1137 (Fed. Cir. 1983); and *Newman v. Quigg*, 877 F.2d 1575, 11 USPQ2d 1340 (Fed. Cir. 1989).

The Board also considers that “aliphatic, aromatic or alicyclic petroleum resins including those modified by hydrogenation” as disclosed in Dobashi et al generically include the claimed “hydrogenated aliphatic/aromatic copolymer petroleum resins.” See page 4 of the Decision.

Applicants wish to emphasize that the present invention requires a *copolymer* resin. However, Dobashi et al does not teach or suggest the specific copolymer resins recited in the present claims. Further, Dobashi et al is silent about the effects achieved by the present invention as discussed above.

Regarding the comparative data contained in the specification, the Board’s position appears to be that the comparison is irrelevant to the rejection because “no example containing no tackifier has been applied.” See page 7 of the Decision. Further, the Board states that “we determine that the hydrogenated tackifier would have been the closest prior art for comparative purposes,” referring to YS POLYESTER T115 exemplified in Dobashi et al. Pages 8 and 9 of the Decision.

Applicants disagree with the Board’s statement that the comparison is irrelevant to the rejection. As described at page 18 of the present specification, Comparative Example 3 contains a hydrogenated terpene resin, which does not fall within the scope of the present claims. Applicants wish to point out that the hydrogenated terpene resin used in Comparative Example 3

of the present specification, i.e., CLEARON P-115, is substantially the same as YS POLYESTER T115 used in Dobashi et al, except that the manufactures are different. Thus, the present specification provides the comparison to the closest prior art.

Finally, the Board disregards Applicants' comparative data, stating they consider the fouling test to be subjective with no standard. See page 9 of the Decision.

Applicants disagree and respectfully submit that the comparative data must be considered. In *In re Saunders and Gemeinhardt*, 170 USPQ 213 (CCPA 1971), the court held that "although we agree that objective comparisons are generally to be preferred to subjective comparisons, we cannot agree that comparisons made in [subjective terms like "good" and "coarse"] can be completely ignored, nor that they are, for that reason alone, entitled to little weight where the Patent Office has not suggested a practicable objective standard for measuring the same variable." *Id.* at 219. In the present case, the fouling evaluation results were based on physical observation of the tested paint films, using the terms "fouling" and "no fouling." The Patent Office has not suggested a practicable objective standard.

In view of the foregoing, Applicants respectfully submit that present claims 1 and 2 are patentable over the cited references and thus the rejection should be withdrawn.

In addition, Applicants respectfully submit that new claims 3 and 4 are patentable over the references of record. Claims 3 and 4 recite a styrene/hydrogenated terpene copolymer resin, which is not disclosed or suggested by the cited references.

II. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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